

Appl. No. 09/706,937
Amdt. dated October 6, 2004
Request for continued examination following final Office action of June 29, 2004

REMARKS

This amendment accompanies the filing of a REQUEST FOR CONTINUED EXAMINATION following a Final Office Action mailed June 29, 2004. In the Final Office Action, Claims 1-3, 5-9 and 12-14 were rejected as anticipated by U.S. Pat. No. 6,470,287 ("Smartt"), Claims 4 and 11 were rejected as obvious in view of the combination of Smartt and U.S. Pat. No. 6,327,535 ("Evans"), and Claim 10 was rejected as obvious in view of the combination of Smartt and U.S. Pat. No. 6,650,998 ("Rutledge").

With this response, Applicants have canceled Claim 7 and amended Claims 1, 2 and 8. Applicants respectfully request reconsideration of Claims 1-6 and 8-14 in view of the following remarks. Applicants submit that all of the pending claims in the present application are allowable, as explained below.

Independent Claim 1

Applicants' independent Claim 1 relates to an index for data that represent geographic features. The index has a structure that includes three dimensions. The first and second dimensions of the index are spatially searchable. A third dimension includes rank information, and the third dimension of the index is searchable for a rank of the geographic features represented by the data.

Applicants' independent Claim 1 was rejected as being anticipated by Smartt. Applicants submit that Smartt does not anticipate amended Claim 1 because Smartt does not disclose all of the elements of this claim. Specifically, Smartt does not disclose the recited limitation of a third dimension that includes rank information, wherein the third dimension is searchable for a rank of the geographic features represented by the data.

Briefly, Smartt discloses a method and system for storing and retrieving spatial data objects from a spatial database. Smartt discloses separating a larger coordinate system into sub-regions ("tiles") wherein each spatial object, such as a road, is assigned to a particular tile. Smartt also discloses providing a series of overlaps between every tile ("shingles"). The shingles allow more data objects to be assigned to only one tile and not split between multiple tiles. (see: Smartt, column 28, line 50 – column 29, line 14).

The Final Office Action pointed to column 25, lines 6-58 of Smartt as disclosing a third dimension that includes rank information and that is searchable for a rank of the

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geographic features. (*see*: Final Office Action, page 4). However, column 25, line 6-58 of Smartt merely provides a comparative analysis of the tile-shingle organization versus the hard boundary tile organization. Data Table 3 is not a database table; rather, Data Table 3 illustrates a comparison of a distribution of street segments at various levels for the tile-shingle structure versus the hard boundary tile structure. Thus, Data Table 3 does not show an index with level information; rather, Data Table 3 merely shows the number streets distributed in the different levels. In fact, Smartt teaches away from the third dimension having rank information. That is, Smartt discloses a separate index for each level ("each level data structure") (*see*, Smartt: Col. 17, lines 20-21, Figure 14) which is the same as the prior art index illustrated in Figure 1 of the Applicants' Specification. Applicants' recited invention of the third dimension of the index including rank information represents a significant improvement over the prior art. Because rank information is incorporated into the multi-dimensional index, there is no need to provide separate index for each level as disclosed in Smartt.

Because Smartt fails to disclose or suggest every claim element, Smartt does not anticipate Applicants' independent Claim 1.

Independent Claim 2

Applicants' independent Claim 2 was rejected as being anticipated by Smartt.

Applicants submit that Smartt does not anticipate amended Claim 2 because Smartt does not disclose all of the elements of this claim. Specifically, Smartt does not disclose that a non-spatial property of the indexed data is searchable using the third dimension.

The Final Office Action pointed to column 7, lines 28-41 and column 8, lines 1-23, Database Table 3 of Smartt as disclosing the non-spatial property of the geographic features represented by the data; specifically, the third dimension includes business name "Leon's BBQ." (*see*, Final Office Action: page 8). Although Smartt discloses an index with a third dimension of business name which may possibly be viewed as a non-spatial property of the geographic feature, Smartt does not disclose a non-spatial property of the indexed data being searchable using the third dimension. As explained in the Applicant's Specification and recited in the dependent Claims 9, 10, 11, 12 and 13, a non-spatial property of the indexed data includes granularity, viewing altitude, scale, expiration date, and creation data. The non-

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spatial property of the indexed data is not a non-spatial property of the geographic features, such as business name. Smartt merely discloses the index with the non-spatial property of business name. (*see*, Smartt: column 8, lines 1-23, Database Table 3). Similar to the discussion below in conjunction with Claim 14 for the non-spatial property of granularity, Smartt fails to disclose or suggest the recited limitation of a non-spatial property of the indexed data, not the non-spatial property of the geographic features, is searchable using the third dimension.

Because Smartt fails to disclose or suggest every claim element, Smartt does not anticipate Applicants' independent Claim 2.

Independent Claim 14

Applicants' independent Claim 14 relates to an index for data that has a structure with three dimensions. The first and second dimensions are spatially searchable using those dimensions. The third dimension includes granularity information of the indexed data, and a granularity of the indexed data is searchable using the third dimension.

The Final Office Action pointed to column 25, lines 6-58 of Smartt as disclosing a third dimension that includes granularity information and a granularity of the indexed data is searchable using the third dimension. (*see*: Final Office Action, page 9). However, column 25, line 6-58 of Smartt merely provides a comparative analysis of the tile with shingles organization as compared to hard boundary tile organization. Data Table 3 is not a database table; rather, Data Table 3 illustrates a comparison of a distribution of street segments at various levels for the tile-shingle structure versus the hard boundary tile structure. Thus, Data Table 3 does not show an index with level information; rather, Data Table 3 merely shows the number streets distributed in the different levels. In fact, Smartt teaches away from the third dimension having rank information. That is, Smartt discloses a separate index for each level ("each level data structure") (*see*, Smartt: Col. 17, lines 20-21, Figure 14) which is the same as the prior art index illustrated in Figure 1 of the Applicants' Specification. Applicants' recited invention of the third dimension of the index including granularity information represents a significant improvement over the prior art. Because granularity information is incorporated into the multi-dimensional index, there is no need to provide a separate index for each level as illustrated in Smartt.

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Because Smartt fails to disclose or suggest every claim element, Smartt does not anticipate Applicants' independent Claim 14.

Dependent Claims 3-6 and 8-13

Applicants' Claims 3-6 and 8-13 are dependent claims that distinguish the cited references at least for the same reasons explained above in connection with their independent base Claims 1 and 2. In addition, these claims recite further features and limitations that are neither disclosed nor suggested by these references.

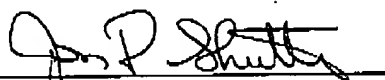
Petition for extension of time

Included with this response is a request for an extension of time to reply to the Final Office Action dated June 29, 2004. Included with this response is an authorization for payment of the fee associated with this request.

Conclusion

All the issues in the Final Office Action, dated June 29, 2004 have been addressed. Favorable consideration of the present application is requested. If any issues remain, the Examiner is invited to call the undersigned.

Respectfully submitted,



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